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THE MALE OF *PSYCHODA LOBATA* TONNOIR (DIPTERA, PSYCHODIDAE)

By Ll. Lloyd, D.Sc.

In connection with a study of the insects breeding in sewage bacteria beds collections of *Psychoda* were made during the summer of 1942 in the Leeds district. All the specimens were tubed from tree-trunks in the neighbourhood of mud flats and to a less extent around cattle pastures. Apart from the common expected species, the collection includes three which Tonnoir (1940) has only recently described, viz. *P. brevicornis* 7 ♂, 4 ♀, *P. spreta* 5 ♂, 1 ♀, and *P. lobata* 7 ♂, 7 ♀. Of the last, Tonnoir used a unique female from Devon, naming as paratypes two females in the Hungarian National Museum. The opportunity is now taken to describe the male.

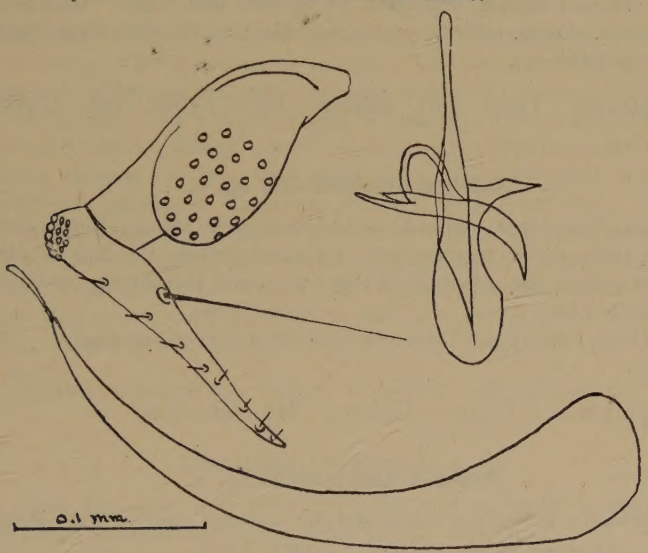

Fig. 1.—Hypopygium of *Psychoda lobata* Tonnoir.

♂. Resembling the female in general features. Hypopygium (fig. 1). Coxite stout with a large lobe bearing long setae on the inner face; style tapering and slightly undulant with a prominent setose lobe on the elbow and carrying a seta nearly as long as the style situated about one-third of the distance from the elbow. Cercopod gently tapering and of average length, retinaculum one-quarter the length of the cercopod. Aedeagus composed of a stout blunt central piece and a secondary piece shaped like an eagle's beak in ventral view and spine-like in side view, its base continuing bow-like round the base of the central piece. There are no special lobes where the aedeagus emerges from the cuticle.

Tonnoir selected the name *lobata* on account of the lobe-like shape of the subgenital plate. It will be observed that the name is equally appropriate to the male as the lobe on the coxite is its most characteristic feature.

The genitalia are described from an examination of seven males from Leeds and three from Appleby collected by the author in viii. and ix.1942, and mounted in de Faure's fluid.

Reference.

Tonnoir, A. L., 1940, A synopsis of the British Psychodidae. *Trans. Soc. Brit. Ent.* **7**, pt. 2.

DESCRIPTIONS OF NEW STAPHYLINIDAE (COLEOPTERA)[1]

By Malcolm Cameron, M.B., R.N., F.R.E.S.

Nazeris indicus sp. n.

Shining, black. Antennae, palpi and legs yellow. Length 5 mm.

Very near *wollastoni* Shp. Of the same colour and lustre, but with longer, thinner antennae, broader and more coarsely punctured head and thorax. Head slightly longer than broad (4 : 3·75), broader than the thorax, the posterior angles broadly rounded, coarsely and closely punctured. Antennae long and slender. Thorax longer than broad (3·5 : 3), narrowed behind, all the angles broadly rounded, along the middle with a fine keel, more coarsely punctured than the head. Elytra a little shorter (3 : 3·5) but as broad as the thorax, widened behind, depressed, as coarsely punctured. Abdomen gradually enlarged backwards, closely, rather coarsely punctured on the first three visible tergites, more finely on the following.

Ghum district: Tiger Hill, altitude 8500–10,000 feet. Type in my collection.

Astenus diversiventris sp. n.

Head, elytra and last three tergites black and moderately shining, thorax duller, pitchy-black, the first three visible tergites red. Antennae yellow, the 2nd to 5th segments infuscate. Legs yellow, the apices of all the femora and the anterior and middle tibiae infuscate. Length 5 mm.

Only differs from *gratus* Cam. in the colour of the abdomen and legs.

♂. Unknown.

Darjeeling district: Ghum. Unique. My collection.

Astenus kashmiricus sp. n.

Black, the posterior half of the suture and the posterior margin of the elytra narrowly reddish-yellow. Antennae and legs yellow. Length 5 mm.

Near *andrewesi* Cam. but the suture is more narrowly reddish-yellow and limited to the posterior half; moreover the head is a little broader, the post-ocular region shorter and more rounded, the sculpture coarser, thorax with coarser sculpture, elytra shorter, only as long as the thorax, its sculpture and that of the abdomen scarcely differing from *andrewesi*.

♂. Unknown.

Kashmir: Gulmarg. Unique. My collection.

Astenus ghumensis sp. n.

Head and thorax rather dull ferruginous red; elytra and abdomen more shining yellowish-red, the 5th visible tergite broadly black at the base. Antennae and legs yellow. Length 4·5 mm.

A narrow elongate species, in build and antennal structure much resembling *gracilentus* Fauv. except that the elytra are shorter. Head scarcely longer than broad, as long as but a little broader than the thorax, the gently rounded post-ocular region coarctate with

[1] Continued from 1943, *Proc. R. ent. Soc. Lond.* (B) **12** : 5.

the base, more than twice as long as the eye, the sculpture rather fine, of the usual reticulate-umbilicate character. Antennae moderate, not reaching the base of the thorax, all the segments longer than broad, the 11th longer than the 10th. Thorax longer than broad (2·5 : 2), oviform, the sculpture as on the head. Elytra slightly shorter and slightly narrower than the thorax, parallel, coarsely, closely and roughly punctured with short, stiff, semi-erect, yellow pubescence. Abdomen closely and rather coarsely punctured on the first three visible tergites, more superficially but scarcely less closely on the 4th and 5th, sparingly on the 6th; with short black setae and finer, sparing yellow pubescence.

♂. Unknown.

Ghum district: Mangpu. Unique. My collection.

Lobochilus labralis sp. n.

Black, shining. Antennae and legs reddish-yellow. Length 4 mm.

This is the largest of the genus known to me and the labrum is furnished with a distinct tooth on each side of the median notch, the eyes, although very large, do not occupy the whole side of the head and a short temple is present. Head slightly transverse, subquadrate, broader than the thorax, in front closely covered with larger and smaller umbilicate punctures, towards the base with small much more superficial but equally close, scarcely umbilicate punctures. Antennae as in *fortepunctatus* Cam. Thorax slightly longer than broad, the sides straight, very slightly retracted behind with a short feeble raised line before the scutellum and with close, flat superficial sculpture much finer than in *fortepunctatus*; ground sculpture absent. Elytra a little longer than the thorax (6 : 5), slightly longer than broad, moderately finely, closely punctured, much more finely than in *fortepunctatus*. Abdomen very finely, closely obsoletely punctured.

Ghum district: Rongdong Valley. Unique. My collection.

Lobochilus brevipennis sp. n.

Shining, black, the elytra dark brown with the base and apical margin narrowly and obscurely lighter. Antennae and legs reddish-yellow. Length 3 mm.

Near *fortepunctatus* Cam. with similar large eyes occupying the whole side of the head, but with shorter elytra, the head and thorax not so broad, the puncturation not quite so close or so coarse. Head broader than the thorax, coarsely and closely punctured. Antennae as in *fortepunctatus*. Thorax slightly longer than broad, with smooth median line. Elytra slightly longer (1·75 : 1·5) and slightly broader than the thorax, parallel, as closely but more finely punctured than in that species.

Ghum district: Mangpu. Unique. My collection.

Lobochilus brachypterus sp. n.

Shining black, antennae and legs reddish-yellow. Length 3 mm.

At once recognised by the elytra being shorter than the thorax. Head slightly broader than long, as broad as the thorax, subquadrate, narrower than in *fortepunctatus* Cam. The eyes very large but not occupying the whole side of the head, the temple about half as long as the eye, the puncturation not quite so coarse and not quite so close as in *fortepunctatus*, the antennae similar. Thorax as long as broad, the sides scarcely retracted behind, with narrow impunctate median line, longer and more parallel-sided, less coarsely and a little less closely punctured than in that species. Elytra shorter than the thorax (1·5 : 2),

narrower at the base, widened towards apex and there as broad as the thorax, the puncturation a little finer and less deep than in *fortepunctatus*. Abdomen extremely finely, moderately closely punctured. Ground sculpture absent on the fore-parts, very feeble on the abdomen.

♂. 6th sternite with a shallow arcuate emargination.

Ghum district: Tiger Hill, altitude 8000–10,000 feet. In moss. Type in my collection.

Medon melancholicus sp. n.

Very near *dolorosus* Cam. and *morosus* Cam. but differing from both in the following respects, the head is quadrate, as broad as long with rounded posterior angles, the eyes larger, the granules of the thorax a little coarser and not quite so close, the sculpture of the elytra is close, asperate and transversely rugulose, the base obscurely reddish. The antennae entirely ferruginous red with the first two and last two segments lighter and constructed as in *morosus*.

♂. 6th sternite broadly feebly arcuately emarginate.

Ghum district: Mangpu. Unique. My collection.

Medon morosus sp. n.

Very closely allied to *dolorosus* Cam. Similar in colour, lustre and sculpture but differs in the completely orbicular head and the slightly longer and stouter antennae which are black with the first two and the last two segments red, the intermediate segments are also longer and the penultimate less transverse. In other respects similar. Length 4·5 mm.

Ghum district: Rongdong Valley. Unique. My collection.

Medon (Hypomedon) fungi sp. n.

Head black, dull, the rest a little shining, the thorax dark reddish-brown, the elytra pitchy with reddish-yellow base, abdomen pitchy, the posterior margins of the first four visible tergites broadly reddish-yellow. Antennae and legs reddish-yellow. Length 3 mm.

Somewhat like *nigritulus* Er. in build but in all other respects different. Head as long as broad, quadrate, as broad as the thorax, the posterior angles rounded, eyes small, much shorter than the temples, densely covered with small umbilicate punctures and rugose. Antennae with the 3rd segment as long as the 2nd, 4th a little longer than broad, 5th as long as broad, 6th to 10th transverse, the penultimate about twice as broad as long. Thorax slightly longer than broad (1·75 : 1·5), the sides nearly straight, slightly retracted behind, along the middle with fine shining line, the rest of the surface closely covered with small, more or less elongate granules. Elytra as long as but broader than the thorax, as long as broad, finely, closely and roughly punctured. Abdomen extremely finely and obsoletely, moderately closely punctured. Pubescence fine, yellow, more evident on the elytra and abdomen. The specimens present no sexual characters.

Ghum district. In fungus. Type in my collection.

Medon (Hypomedon) laevior sp. n.

Black, head and thorax shining, elytra and abdomen duller, the former with the posterior margin very narrowly and obscurely yellowish. Antennae and legs reddish-yellow. Length 4 mm.

In build and colour somewhat like *obsoletus* Nord. but with more shining, narrower more obsoletely punctured head and thorax, thinner and slightly longer antennae. Head very slightly longer than broad, quadrate, slightly narrower than the thorax, the eyes small, much shorter than the temples, the posterior angle rounded; in front and on the disc with small, close, flat, very obsolete punctures, elsewhere with an extremely fine but rather close and indistinct puncturation. Antennae with the 3rd to 7th segments all longer than broad, decreasing in length, the 8th to 10th about as long as broad. Thorax scarcely longer than broad, the sides straight and slightly retracted behind, without central line, extremely finely obsoletely, moderately closely punctured. Elytra longer than the thorax (2·75 : 2), very finely, closely subasperately punctured. Abdomen extremely finely, rather closely punctured, finely and rather closely pubescent. Ground sculpture absent on the fore-parts, scarcely visible on the abdomen.

Ghum district: Mangpu. Unique. My collection.

Medon (Hypomedon) ghumensis sp. n.

Shining, head black, thorax reddish-brown, elytra reddish-yellow with the posterior half more or less infuscate; abdomen yellowish-red to reddish-brown, the 5th visible tergite sometimes infuscate. Antennae and legs reddish-yellow. Length 3·5–4 mm.

Near *singgalangensis* Cam. Very similarly coloured but narrower, more shining, the fore-parts less finely and less closely punctured, the posterior angles of the head more rounded. Head as long as broad, a little broader than the thorax, the posterior angles rounded, the eyes small: on the disc and in front with close superficial umbilicate punctures of varying size, towards the base with much smaller and more obsolete punctures and a feeble ground sculpture. Antennae with the 3rd segment longer than the 2nd, 4th and 5th about twice as long as broad, the following about as long as broad. Thorax as long as broad, the sides straight and slightly retracted behind, along the middle with a fine impunctate line, the puncturation much finer and more sparing than on the front of the head, superficial and feebly umbilicate; ground sculpture absent. Elytra a little longer than the thorax (2·5 : 2), as long as broad, finely, moderately closely punctured and without ground sculpture. Abdomen very finely, moderately closely punctured. Pubescence yellow, sparing on the head and thorax, moderately close on the elytra and abdomen.

Ghum district. Type in my collection.

Charichirus immaculatus sp. n.

Black, a little shining, the humeral angles of the elytra and posterior margins of the tergites narrowly and obscurely reddish. Antennae reddish. Legs reddish-yellow. Length 7·5 mm.

Head transverse, subquadrate, as broad as the thorax, eyes moderate, temples parallel, the posterior angles briefly rounded, along the middle of the anterior half with a more or less distinct, fine shining line, puncturation close, moderately large and umbilicate on the anterior half, towards the base smaller and more superficial and confused. Antennae rather long, the penultimate segments a little longer than broad. Thorax as long as broad, trapezoidal, along the middle with distinct raised shining line, the puncturation on the disc very like that on the front part of the head, at the sides of similar character but smaller. Elytra longer than the thorax (5 : 4), closely, rather finely asperately punctured. Abdomen extremely finely and closely punctured and pubescent, subsericeous.

♂. Unknown.

Ghum district: Rongdong Valley. Unique. My collection.

Lathrobium (Lobrathium) alticola sp. n.

Black, shining. Antennae brown. Legs pitchy, the tarsi yellow. Length 5 mm.

In colour, lustre and build (except for the shorter elytra) much resembling *filiforme* Er., but the antennae are shorter, the puncturation closer and less fine, the elytra shorter and furnished with a distinct ridge on the reflexed side. Head square, slightly broader than the thorax, the posterior angles rounded, the eyes very small, puncturation close, rather coarse and umbilicate, finer towards the base. Antennae short, the 4th segment very slightly longer than broad, 5th to 7th moniliform, 8th to 10th scarcely transverse. Thorax cylindrical, longer than broad (3 : 2·5), along the middle with narrow impunctate area, elsewhere closely punctured like the head on the disc. Elytra as long and as broad as the thorax, parallel, as closely but more coarsely punctured. Abdomen rather finely, moderately closely punctured.

♂. Unknown.

Kashmir: Gulmarg, altitude 8000–10,000 feet. Unique. My collection.

Cryptobium brachypterum sp. n.

Moderately shining, dark reddish-brown. Antennae and legs reddish-yellow. Length 7·75 mm.

Head similar in shape to *sikkimense* Cam. but shorter. Head as long as broad, broader than the thorax, the post-ocular region rounded and slightly dilated, the eyes rather small, the frontal region with four larger quadrately placed punctures, elsewhere with larger and smaller moderately close punctures. Antennae with the penultimate joints slightly longer than broad: thorax cylindrical, longer than broad (5 : 4), along the middle with narrow impunctate area, elsewhere with puncturation much as on the head. Elytra shorter than the thorax (4 : 5), flattened, parallel, with a fine shining keel between the upper surface and the reflexed side, the sculpture coarse, transversely rugulose. Abdomen finely and sparingly punctured. Fore-parts without, abdomen with fine coriaceous ground sculpture.

♂. 6th sternite with a nearly rectangular excision at the middle of the posterior margin: 5th truncate, the margin itself and adjacent area furnished with long black setae.

Ghum district: Tiger Hill, altitude 8500–10,000 feet. Type in my collection.

THE *LUBENTINA* GROUP OF THE GENUS *EUTHALIA* HÜBNER (LEPIDOPTERA: NYMPHALIDAE)

By G. Talbot, F.R.E.S.

The Malaysian species of the *lubentina* group of the genus *Euthalia* Hübner were partly revised by Pendlebury and Corbet (1938), who defined the characters of pattern and genitalia of the four species occurring in that subregion. Recently I have classified and arranged the whole of the material in the British Museum (Natural History), and this has provided further information concerning the group as a whole. In the present paper three new subspecies are described. The six species comprising the whole group are arranged in the following key according to their apparent relationship. This key is modified from the one given by Pendlebury and Corbet (1938).

Most of the types of forms described by Fruhstorfer should be in the Paris Museum, and it has not always been easy to determine from the description to which species some of these forms belong. The references to all names have been checked, and these are given in full as they are not available in any single work.

I am indebted to Dr. A. S. Corbet for his help with some critical points, and to the Trustees of the British Museum for facilities afforded for study.

Key to species.

Males.

1(6). Upperside fore-wing without white spots at cell end.
2(3). Upperside hind-wing without a tornal red spot . . . . . *amanda.*
3. Upperside hind-wing with a tornal red spot.
4(5). Upperside both wings without intraneural black stripes . . . . *djata.*
5. Upperside both wings with intraneural black stripes . . . *irrubescens.*
6. Upperside fore-wing with white spots at cell end as well as an outer series of subapical white spots.
7(8). Upperside fore-wing cell-spot and *dc* spot usually red, the red scaling rarely vestigial. Fore-leg reddened in continental specimens as far as northern Malaya, and in those from Philippines . . . *lubentina.*
8. Upperside fore-wing cell-spot and *dc* spot not red or red scaling vestigial.
9(10). Fore-leg not reddened . . . . . *whiteheadi.*
10. Fore-leg reddened . . . . . *adonia.*

Females.

1(4). Upperside hind-wing a discal and post-discal black line enclosing a broad orange-red band (only faintly indicated in *d. djata*).
2(3). Upperside hind-wing a submarginal row of six red spots. . . *amanda.*
3. Upperside hind-wing a submarginal row of three red spots (in areas 4 to 6) . . . . . *djata.*
4. Upperside hind-wing without a discal and post-discal black line, and no broad orange-red post-discal band.
5(10). Upperside hind-wing without a discal white band.
6(7). Upperside hind-wing without post-discal or submarginal spots *irrubescens.*
7. Upperside hind-wing with a post-discal and a submarginal row of spots.

8(9). Underside fore-wing with white post-cellular spot in area 4 touching *dc* red spot. . . . . *lubentina*.
9. Underside fore-wing with white post-cellular spot in base of area 4 absent . . . . . *whiteheadi*.
10. Upperside hind-wing with a discal white band . . . . . *adonia*.

Systematic List.

(An asterisk indicates that the type is in the British Museum (N.H.).)

1. *Euthalia amanda* (Hewitson).

*Ssp. *amanda* (Hewitson), 1861. Celebes.

Adolias amanda Hewitson, 1861, *Exot. Butts.*, **2**, *Adolias* pl. i, figs. 3, 4 (♂♀, Celebes). Type from Macassar.
Euthalia amanda eutaenia Fruhstorfer, 1913, *in* Seitz, *Gross-Schmett. Erde* **9** : 678 (North Celebes).

Ssp. *periya* Fruhstorfer, 1913. Banggai.

Euthalia amanda periya Fruhstorfer, 1913, *in* Seitz, *Gross-Schmett. Erde* **9** : 678 (♂♀, Bangkai).

Ssp. **sulaensis** subsp. n. Sula Islands.

Euthalia amabilis Staudinger, 1896 (part.), *Iris* **9** : 221 (♂ only).

♂. Upperside very similar to nominotypical form. Underside hind-wing with the post-discal row of red spots replaced by spots of the ground-colour, defined by dark edging, and placed somewhat more distad; a submarginal row of red spots as in the female of the Banggai subspecies.

Habitat.—Sula Mangoli, 2 ♂ (*Platen*).

Staudinger's description of *amabilis* includes two species. The female, being first described with reference to a good coloured figure, is here taken to be the holotype of *amabilis*. The description of the male, whose essential characters are given above, obviously indicates a form of *amanda*. The female, as the figure (t.i, fig. 6) shows, is equally clearly a form of *adonia* (Cramer).

The following considerations preclude *amabilis* from being a distinct species.

1. So far no distinct species of butterfly is known from the Sula Is. All belong to species occurring elsewhere, usually in Celebes or the Moluccas.

2. Although the nearest recorded habitat for *adonia* is Borneo and Palawan, there is nothing against it occurring on Sula. *Tanaëcia pelea* (F.) is represented on Sula by the subspecies *dohertyi* Butler, whilst it is not recorded nearer than Borneo and Palawan.

3. Three species of the *lubentina* group occur on Java. In two of these the female appears to be rare, but in the other species it is common or, perhaps, more common than the male. A collector might, therefore, obtain two females of one and a male only of each of the others. This, apparently, is what has happened in the case of *amabilis* of which 2 ♂ and 3 ♀ specimens were obtained, the true opposite sexes being absent.

2. *Euthalia djata* Distant.

*Ssp. *siamica* Riley & Godfrey, 1925. Siam; Langkawi Is.

Euthalia ludonia siamica Riley & Godfrey, 1925, *Entomologist* **58** : 140 (♀, Siam : Pak Djong).

*Ssp. *rubidifascia* Joicey & Talbot, 1929. Sumatra.

Euthalia djata rubidifascia Joicey & Talbot, 1929, *Bull. Hill Mus.* **3** : 79, pl. ii, fig. 2 (♀, Sumatra).

Ssp. *djata* Distant, 1887. North Borneo.

Euthalia djata Distant, 1887, *Ann. Mag. nat. Hist.* (5) **19** : 53 (♂♀, North Borneo).
Syn.—**Euthalia adeona* Smith & Kirby, 1884, *Rhop. Exot.* **2** : 13, *Euth.* pl. iv, figs. 5, 6 (♀) (North Borneo : Silam).

Ssp. *ludonia* Staudinger, 1889. Palawan.

Euthalia lubentina var. *ludonia* Staudinger, 1889, *Iris* **2** : 72–73 (♂♀, Palawan).

3. *Euthalia irrubescens* Grose-Smith.

*Ssp. *irrubescens* Grose-Smith, 1893. Western and Southern China.

Euthalia irrubescens Grose-Smith, 1893, *Ann. Mag. nat. Hist.* (6) **11** : 316 (♂, Omeishan).
Euthalia irrubescens subsp., Mell, 1935, *Deutsche ent. Z.* **1935** : 241 (Kwantung, 1 ♂ seen at rest. Described as having upperside strongly metallic glossy green.)

Ssp. *fulguralis* (Wilem.), 1911. Formosa.

Euripus fulguralis Wileman, 1911, *Entomologist* **44** : 263, fig. (♀) (Formosa).
Syn.—*Euthalia irrubescens gustavi* Fruhstorfer, 1913, *Ent. Runds.* **30** : 91 (♂, Formosa).

4. *Euthalia lubentina* (Cramer).

Ssp. *psittacus* Fruhstorfer, 1907. Ceylon.

Euthalia lubentina psittacus Fruhstorfer, 1907, *Soc. Ent.* **21** : 52 (Ceylon).

Ssp. *arasada* Fruhstorfer, 1913. South India.

Euthalia lubentina arasada Fruhstorfer, 1913, *in* Seitz, *Gross-Schmett. Erde* **9** : 676 (Karwar).

Ssp. *lubentina* (Cramer), 1779. Nepal to Burma; South China; Hainan; Tonkin; Siam; Cochinchina; S.W. Yunnan.

Papilio lubentina Cramer, 1779, *Pap. Exot.* **2** : 92, pl. clv, figs. C, D (♀, China).

Dry-season form *indica* Fruhstorfer, 1904.

Euthalia lubentina indica Fruhstorfer, 1904, *Stettin. ent. Ztg.* **65** : 350 (Sikkim, Assam, Burma, Siam); *id.*, 1913, **9** : 676, t. 131*a* (♀).

Ssp. *malaccana* Fruhstorfer, 1899. Malaya.

Euthalia adonia malaccana Fruhstorfer, 1899, *Berlin. ent. Z.* **44** : 142 (♂, Malacca) (♀ = *adonia* ssp.).
Syn.—*Euthalia lubentina chersonesia* Fruhstorfer, 1904, *Stettin. ent. Ztg.* **65** : 349 (♀, Perak).

*Ssp. **caudata** subsp. n.

♂. Upperside fore-wing with the post-discal four white spots placed in an oblique straight line, the spot in area 5 not placed directly under the spot in 6 as in most *lubentina* forms; subapical two spots placed farther apart than in continental subspecies; post-cellular four spots very small; white cell-bar incurved on its outer edge; a *dc* red spot. In all the foregoing characters resembles *dharma* Roep. from Java, but cell is without red scaling. Hind-wing anal lobe strongly produced, being longer than in *dharma*; markings as in *dharma*.

Underside paler brown than in the Javan form, but markings similar. Hind-wing post-discal red spots a little larger; posterior green area restricted to a marginal small patch not extended above vein 3.

Hab.—Sumatra : Palembang, 1 ♂ (ex Coll. Oberthür).

Ssp. *dharma* Roepke, 1938. Java.

Euthalia lubentina dharma Roepke, 1938, *Rhop. Jav.* **3** : 330, pl. 34, figs. 3 (♂), 4 (♀) (W. Java : Soekaboemi).

*Ssp. *adinda* Lathy, 1913. Nias.

Euthalia adinda Lathy (March, 1913), *Entomologist* **46** : 100 (♀, Nias).
*Syn.—*Euthalia lubentina adinda* Fruhstorfer (Oct., 1913), *in* Seitz, *Gross-Schmett. Erde* **9** : 677 (♀, Nias).

Ssp. *rajana* Fruhstorfer, 1913. Banka.

Euthalia lubentina rajana Fruhstorfer, 1913, *in* Seitz, *Gross-Schmett. Erde* **9** : 676 (♂♀, Banka).

Ssp. *adeonides* Fruhstorfer, 1904. Borneo.

Euthalia lubentina adeonides Fruhstorfer, 1904, *Stettin. ent. Ztg.* **65** : 351 (♀, South Borneo).

The male is apparently not known.

Ssp. *philippensis* Fruhstorfer, 1899. Bazilan.

Euthalia lubentina philippensis Fruhstorfer, 1899, *Berlin. ent. Z.* **44** : 141 (♂, Bazilan).

In British Museum, a female from Mindanao.

Ssp. *nadenya* Fruhstorfer, 1913. Luzon.

Euthalia lubentina nadenya Fruhstorfer, 1913, *in* Seitz, *Gross-Schmett. Erde* **9** : 677 (♂♀, Luzon).

5. *Euthalia whiteheadi* Grose-Smith.

Ssp. *zinara* Pendlebury & Corbet, 1938. Peninsular Siam; Malaya Hills.

Euthalia whiteheadi zinara Pendlebury & Corbet, 1938, *Journ. F.M.S. Mus.* **18** (2) : 238, fig. 3 (genit.) (♂♀, Peninsular Siam).

Ssp. *mariae* Fruhstorfer, 1904. Sumatra.

Euthalia lubentina mariae Fruhstorfer, 1904, *Stettin. ent. Ztg.* **65** : 348 (♂, Sumatra; Sinabong; Pad. Bovenlanden); *id.*, 1913, *in* Seitz, *Gross-Schmett. Erde* **9** : 676–7 (♂♀).

*Ssp. *culminicola* Fruhstorfer, 1894. Java.

Euthalia culminicola Fruhstorfer, *Ent. Nachr.* **20** : 300 (Java : ♂♀, Gedé; ♀, Tengger, East Java).

*Ssp. *whiteheadi* Grose-Smith, 1889. North Borneo.

Euthalia whiteheadi Grose-Smith, 1889, *Ann. Mag. nat. Hist.* (6) **3** : 313 (♂♀, Kina Balu, North Borneo).

6. *Euthalia adonia* (Cramer).

Ssp. *beata* Fruhstorfer, 1905. Siam.

Euthalia adonia beata Fruhstorfer, 1905, *Int. ent. Z.* **19** : 63 (♀, Siam : Bangkok).

*Ssp. *pinwilli* Pendlebury & Corbet, 1938. Malaya.

Euthalia adonia pinwilli Pendlebury & Corbet, 1938, *Journ. F.M.S. Mus.* **18** (2) : 238, fig. 2 (genit.) (♂, Malacca; ♀, Perak).

Ssp. *sumatrana* Fruhstorfer, 1904. Sumatra.

Euthalia adonia sumatrana Fruhstorfer, 1904, *Stettin. ent. Ztg.* **65** : 351 (♂, Sumatra : Battak); *id.*, 1913, **9** : 679 (♀, Palembang).

The male is not in the British Museum.

Ssp. *adonia* (Cramer), 1782. Java.

Papilio adonia Cramer, 1782, *Pap. Exot.* **3** : 109, pl. cclv, figs. C, D (♀, Java).

Ssp. *pura* Fruhstorfer, 1904. Bawean.

Euthalia adonia pura Fruhstorfer, 1904, *Insektenb.* **21** : 309 (♂, Bawean); *id.*, 1913, *in* Seitz, *Gross-Schmett. Erde* **9** : 678, t. 131*a* (♂♀).

Ssp. *sapitana* Fruhstorfer, 1899. Lombok.

Euthalia adonia sapitana Fruhstorfer, 1899, *Berlin. ent. Z.* **44** : 145 (Sapit, Lombok).

*Ssp. **kangeana** subsp. n.

♂. Resembles *montana* Fruhstorfer in the reduced red scaling of the hind-wing spots. Upperside fore-wing spots small as in *montana*, but post-discal spots present in areas 2 and 3. Hind-wing post-discal band of spots less curved than in other forms, the spot in area 6 with its inner edge but slightly proximad of spot in 5, these two spots only lightly scaled red; post-discal black spots in areas 2 to 6 smaller than in *montana*, but similar to those of Javan specimens; posterior green area to vein 5 as in *pura*.

Underside fore-wing white spots prominent as in the Javan form. Hind-wing post-discal band nearly straight, its anterior spot (in 6) placed nearer margin than other spots of the band; spots in 4 to 7 lightly scaled red, those in 2 and 3 with red scaling further reduced. Ground-colour of wing olive-green, slightly more accentuated over posterior distal area.

♀. Upperside bands narrower than in the Javan or Borneo forms, but wider than in *pura* from Bawean. Fore-wing spot in area 2 produced distad as in *montana*; lower two spots of the band much shorter than in Javan or Borneo specimens. Hind-wing band nearly straight, not curved on its inner edge, somewhat as in *pura* but wider.

Underside somewhat as in *pura*, the white markings larger. Hind-wing posterior green suffusion less developed than in *montana*.

Hab.—Kangean Islands, 1 ♂, 5 ♀ (received from the Zool. Mus. Buitenzorg Java).

Ssp. *montana* Fruhstorfer, 1899. Borneo.

Euthalia adonia montana Fruhstorfer, 1899, *Berlin. ent. Z.* **44** : 142 (♂♀, North Borneo : Kina Balu).

Ssp. *princesa* Fruhstorfer, 1899. Palawan.

Euthalia adonia princesa Fruhstorfer, 1899, *Berlin. ent. Z.* **44** : 142 (♀, Palawan).

Ssp. *amabilis* Staudinger, 1896. Sula Mangoli.

Euthalia amabilis Staudinger (part.), *Iris* **9** : 220, ♂♀, t. 1, fig. 6 (♀, Sula Mangoli). ♂ = *amanda* subsp. (*q.v.*).

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Mell, R. S., 1935, "Die Euthaliini Sud- und Sudostchinas," *Deutsche ent. Z.* **1935** : 225–251.

Pendlebury, H. M., and Corbet, A. S., 1938, *Journ. F.M.S. Mus.* **18** : 236–239 (four text-figures of genitalia).

RHABDIOPTERYX ANGLICA, A NEW BRITISH SPECIES OF PLECOPTERA

By D. E. Kimmins.

(*Dept. of Entomology, British Museum (Nat. Hist.).*)

This species was originally placed on the British list under the name *Rhabdiopteryx neglecta* Albarda. The record was based on the capture of a single female at Jugger Beck, Harwood Dale, Yorks, in 1927. Lucas included it without question in his check-list of the British Plecoptera in 1932, but when Dr. Noel Hynes was working at the British Museum early in 1940 on the preparation of his keys to the British Plecoptera, we re-examined this female specimen, and on comparing it with continental examples of *R. neglecta*, it was found to differ, particularly in the form of the subgenital plate. No more material having come to hand, the species was included by Dr. Hynes in his keys with a query and a note that the specific identification was in doubt.

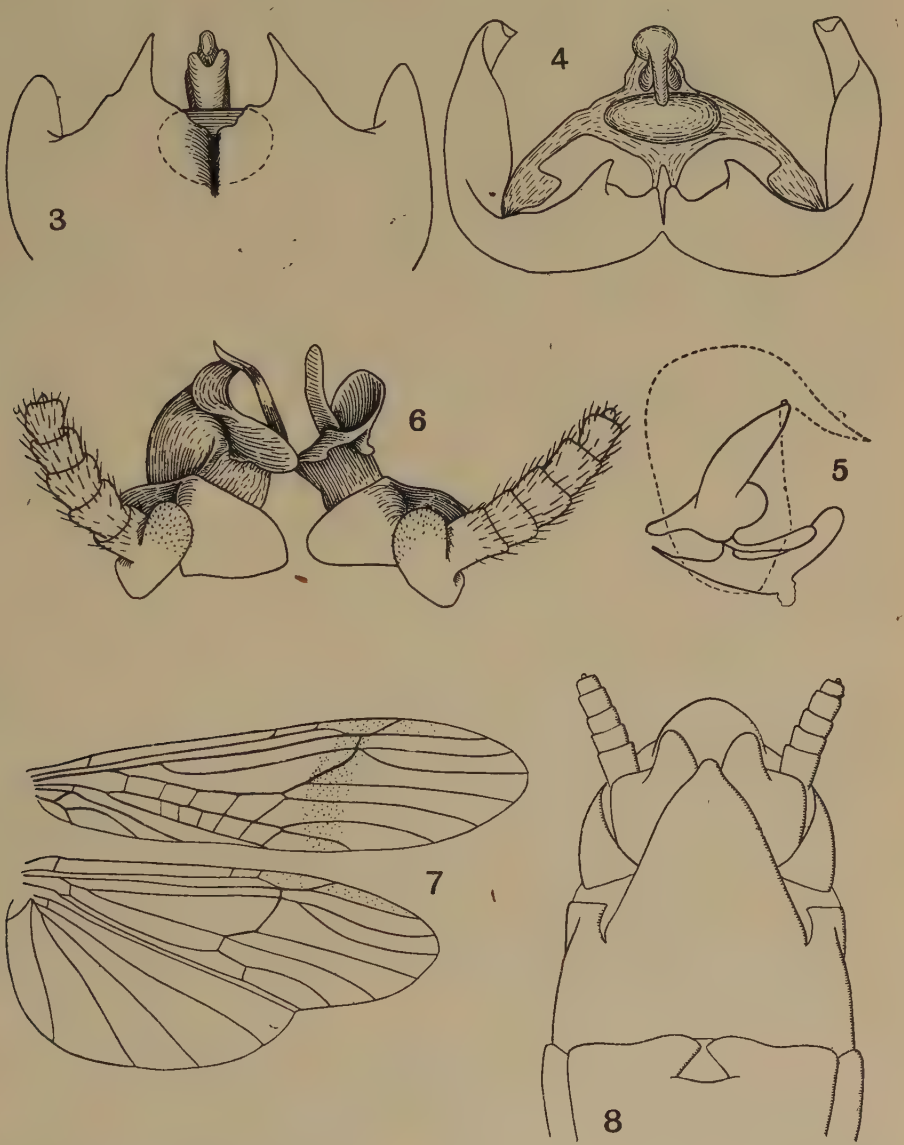
Figs. 1–2.—*Rhabdiopteryx anglica* sp. n. ♂, apex of abdomen, 1, from above, 2, from side.

Thus the matter remained until the spring of 1942, when I received from Mr. Whitehead (through my colleague Mr. M. E. Mosely) two male examples of *Rhabdiopteryx* from another Yorkshire locality about ten miles distant from Jugger Beck. Examination of the male genitalia showed that the species was certainly not the true *neglecta*, but resembled Klapálek's species *R. acuminata*, described from a Finnish example. His description of the latter is written in Czech, which I cannot read, but he gives figures of the genitalia and a Latin key to the European species of *Rhabdiopteryx*. Mr. Whitehead's specimens differ in certain details from Klapálek's figures and I have decided to establish a new species based on his specimens, rather than to change a wrongly applied name for one of which the identification is only doubtfully correct.

Rhabdiopteryx anglica sp. n.

1929, *Rhabdiopteryx neglecta* Whitehead (*nec* Albarda) *Naturalist* **1929** : 405.
1932, *Rhabdiopteryx neglecta* Albarda, Lucas, *Entomologist* **65** : 41.
1940, *Rhabdiopteryx ?neglecta* Hynes, *Freshw. Biol. Ass. Sci. Publ.* **2** : 8, 9, 20, 34.

♂. Head dark brown, antennae long, filiform, slightly paler, except the two basal segments. Pronotum pale fuscous, with darker markings, slightly wider than long, a little narrowed anteriorly. Meso- and metanotum dark brown. Abdomen dark fuscous above, paler beneath. Legs fuscous, underside of femora, and most of tibiae except apices and bases, paler. Knees noticeably darker. Wings hyaline, anterior very slightly smoky, with



FIGS. 3–8.—*Rhabdiopteryx anglica* sp. n. 3–7, ♂, 8, ♀. 3, tenth tergite and supra-anal lobe from above, 4, the same from behind, 5, the same from side, tenth tergite shown in broken line, 6, cerci and sub-anal plates from above, 7, wings, 8, apex of abdomen, ♀, from beneath.

an indistinct lunate cloud over anastomosis : venation fuscous. One additional cross-vein only between costa and subcosta in both wings. Upper branch of radial sector (R_{2+3}) not forked.

♂ genitalia :—Tenth tergite bearing two acute, somewhat downwardly directed processes. Dorsal surface between these processes depressed, apical margin excised, with a deep slit in the centre of the excision. Supra-anal lobe consisting of a pair of gently upcurved processes, the upper excised at its apex and with a large, somewhat, reniform structure placed transversely at its base. Cerci six-segmented, apical one very small. A single bulbous, membranous process at base of first segment. Sub-anal plates asymmetric, foliate, each enclosing an asymmetric upcurved spine, and with a slender digitate process at base on ventral surface, armed with a few setae. Subgenital plate (ventral plate) large, long, apex upturned and acute from side, from above extreme apex recurved and slightly truncate or excised. No ventral lobe or vesicle.

♀. General appearance as in ♂, pronotum scarcely paler than head (♀ allotype rather bleached as a result of preservation in fluid). Fore-wing with one or two, hind-wing with one additional cross-vein between costa and subcosta.

♀ genitalia :—Apical margin of seventh sternite sinuous, with an excision at its centre, the mouth of the excision almost closed by a pair of opposing triangular lobes, base of the excision slightly concave. Margin of the eighth sternite produced at its centre in a long triangular plate, somewhat contracted near its apex which reaches to the level of the base of the cerci. Sub-anal plates broad, apices produced and rounded, slightly divergent. Cerci short, cylindrical, six-segmented, apical one very small.

Length of body ♂, 9 mm., ♀, 9·5 mm. Length of fore-wing ♂, 10 mm., ♀, 11 mm.

YORKSHIRE : Pickering Beck, 28.iii., 2 ♂♂, 25.iv.1942, 1 ♀ (*H. Whitehead*); Harwood Dale, Jugger Beck, 10.iv.1927, 1 ♀ (*E. Percival*).

Type ♂, paratype ♂ from Pickering Beck, allotype ♀ from Jugger Beck in the collection of the British Museum, paratype ♀ in Mr. Whitehead's collection. Type and allotype preserved in 2% formaldehyde, genitalia and wings of paratype male mounted as microscope slides.

Mr. Whitehead writes of the type of habitat : " Both streams are about 10 ft. wide, fairly rapid, few projecting stones and plenty of alders growing along the banks. The specimens were obtained by beating these bushes. Pickering Beck is definitely a calcareous stream."

This species is most closely related to *R. acuminata* Klap. I have not seen specimens of the latter but in comparison with Klapálek's figures, the male of *R. anglica* differs in the much longer cerci, more produced apices to the lobes of the tenth tergite, and in the form of the sub-anal plates. (The supra-anal lobe is not shown in Klapálek's figures.) From *R. hamulata* Klap. it may be distinguished by the simple upper branch of the radial sector and the absence of tubercles on the apex of the subgenital plate of the male. From *R. neglecta* Alb. and *R. alpina* Kuhtreiber it may be separated by the produced apex of the subgenital plate in the male.

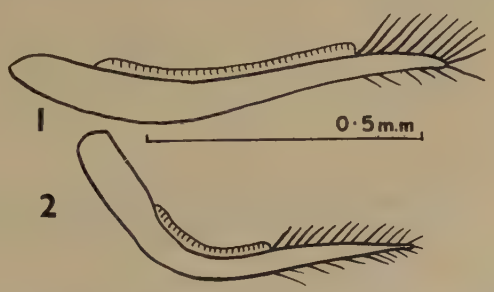
REFERENCE.

KLAPÁLEK, F., 1907, *Čas. Ces. Spol. Ent.* **2** : 10–14.

A NEW SPECIES OF *GYMNOPOLYBIA* DUCKE (HYMEN., VESPIDAE)

By O. W. Richards, M.A., D.Sc.

Ducke (1910 : 517) erected the genus *Stelopolybia* for thirteen species, of which *Polybia infernalis* Saussure [1854] is here chosen as the type. Ducke (1914 : 317) erected another genus *Gymnopolybia* for the first ten species of *Stelopolybia* Ducke 1910 and of these *Polybia vulgaris* Ducke, 1904, is here chosen as the type. These two genera were separated from *Polybia* Lepeletier, 1836, because of the development of a prepectal furrow; there is never a trace of this in *Polybia*, though in the other two genera it is often faintly impressed and indicated mainly by the colour of the integument. The principal reason for distinguishing *Stelopolybia* from *Gymnopolybia* is because of the very different types of nest. In the former the nest hangs freely from vegetation and is surrounded by an envelope; in the latter, the very much larger nest is in a hollow tree or rock-cavity and has no envelope. In the adult insects, the



Figs. 1–2.—1, Right fore tibial spur of *Gymnopolybia angulata* (Fab.). 2, right fore tibial spur of *Stelopolybia obidensis* (Ducke).

only differences noted by Ducke are :—*Gymnopolybia* malar space longer, eyes (especially in larger species) more hairy. These are comparative characters and would be difficult to use if the genera were much larger. The following list includes additional characters; no one of them enables a sharp separation to be made but in combination they are effective.

Gymnopolybia	*Stelopolybia*
Malar space longer.	Malar space shorter.
Eyes more hairy.	Eyes less hairy.
Occipital keel distinct (weakest in *G. cayennensis* (Fab.)).	Occipital keel very weak (even dorsally) or absent.
Scutellum with a marked central depression or with an impressed line (weakest in *G. cayennensis* (Fab.)).	Scutellum with no trace of such line or depression.
Comb-like part of fore tibial spur much less than half as long as spur (fig. 1).	Comb-like part of fore tibial spur nearly half as long as spur (fig. 2).
Proepisternum bordered laterally.	Proepisternum not bordered laterally.

Ducke's key to the three species of *Stelopolybia* (s.s.) is satisfactory but the key to *Gymnopolybia* is rather difficult to use, the characters being mostly

comparative. Several structural details were overlooked. The most important of these are the following.

1. Pronotal fovea and prominence. In many VESPIDAE there is a small fovea (superficially resembling a spiracle) on the lateral aspect of the pronotum. In front of the fovea, there is often a prominence, the exact shape of which is an important character in *Gymnopolybia* (figs. 3 and 4).

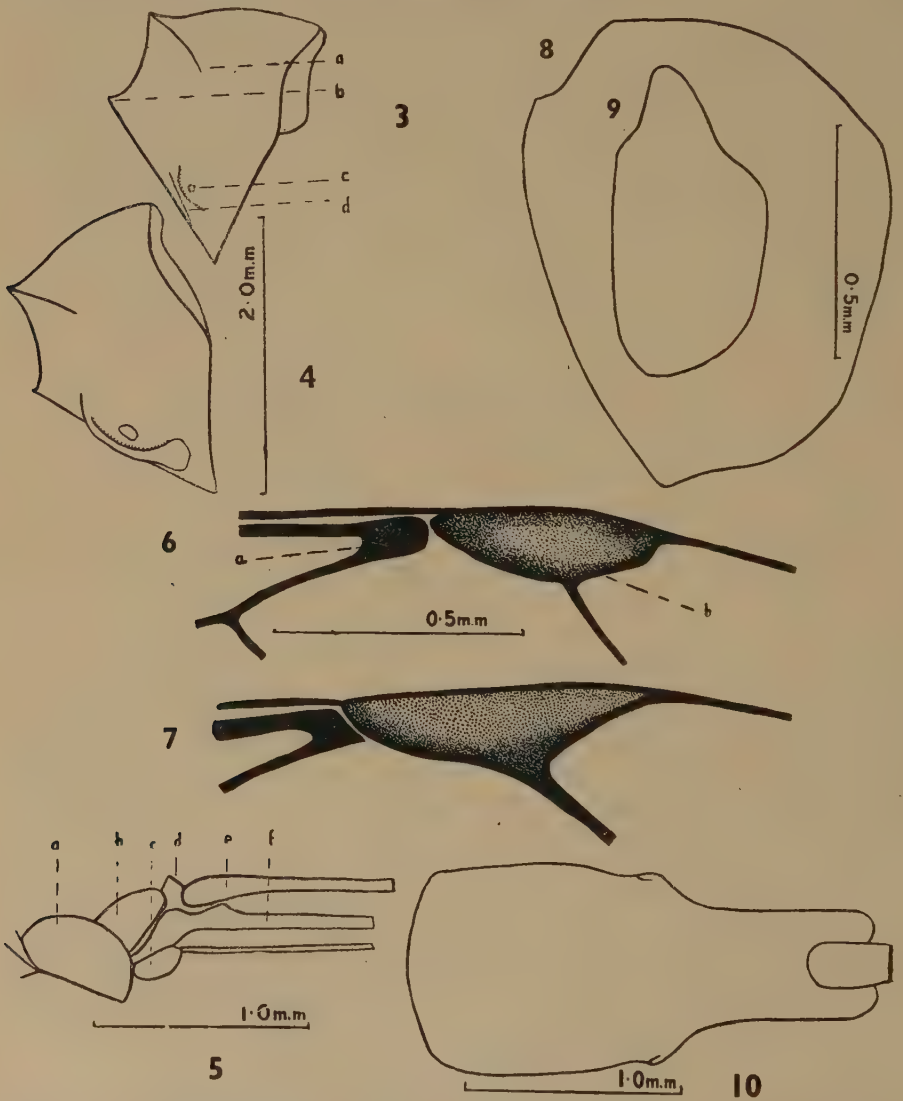


FIG. 3–10.—3, Lateral (left) view of pronotum of *G. cornelliana* sp. n.: a, pronotal keel; b, anterior margin of pronotum; c, pronotal fovea; d, prominence in front of fovea. 4, lateral (left) view of pronotum of *G. xanthopus* (Sauss.). 5, base of costa (right) of *G. vicina* (Sauss.): a, tegula; b, 1st axillary; c, 2nd axillary; d, projecting keel; e, costa; f, Sc + R + M. 6, stigmal region of right fore-wing of *G. cayennensis* (Fab.): a, parastigma; b, pterostigma. 7, stigmal region of right fore-wing of *G. angulata* (Fab.). 8, right tegula of *G. angulata* (Fab.). 9, right tegula of *G. cornelliana* sp. n. 10, first abdominal tergite of *G. cornelliana* sp. n.

2. On the ventral surface of the fore-wing, where it articulates with the first and second axillary sclerites, veins C and R + M are crossed by a strong raised keel, ending costally at the tip of the first axillary. In *G. vicina* (Sauss.), unlike all the other species, this keel is produced still further, so as to appear as a small point when the costa is examined dorsally (fig. 5).

3. The veins R + M and M in the fore-wing together form a thickening which may be termed the parastigma. This is much longer in *G. cayennensis* (Fab.) than in any of the other species (figs. 6 and 7).

4. In all species, except *G. cornelliana* sp. n., the outer margin of the tegula is regularly curved. In that species, the margin is emarginate so that the anterior corner of the tegula is acute instead of being almost a right-angle (figs. 8 and 9).

Key to the species of *Gymnopolybia* (females).

1. Pronotal keel absent. Parastigma in fore-wings elongate. Yellow and black species . . . . . *G. cayennensis* (Fab.).
–. Pronotal keel distinctly indicated. Parastigma in fore-wings short . . 2.
2. Pronotal keel very strong, forming more or less distinct lobes at sides . 3.
–. Pronotal keel distinct in centre but much weaker, not forming lobes at sides . . . . . 6.
3. Smaller species (wing-length about 10·0 mm.). Pronotal keel less projecting laterally. Transverse keel beneath base of costa produced so as to be visible as a small point projecting beyond the costa. Mainly black species . . . . . *G. vicina* (Sauss.).
–. Larger species (wing-length at least 13·0 mm.). Pronotal keel much more lobate at sides. Transverse keel beneath base of costa not projecting . 4.
4. Abdominal tergite 1 more than three times as long as its posterior width. Prominence in front of pronotal fovea almost obsolete dorsally, weak below. Black and whitish species . . . . . *G. constructrix* (Sauss.).
–. Abdominal tergite 1 barely two and one-half times as long as its posterior width. Prominence in front of pronotal fovea strong and acute dorsally 5.
5. Mainly black species (wings yellowish; antennae mainly orange; otherwise at most tibiae, tarsi and markings on scutellum, postscutellum and propodeum yellow). Lower part of prominence in front of pronotal fovea narrower . . . . . *G. angulata* (Fab.).
–. Mainly yellowish species with the abdomen considerably black marked. Lower part of prominence in front of pronotal fovea broader *G. testacea* (Fab.).
6. Prominence in front of pronotal fovea very strong, acute and reflexed. Sides of abdominal tergite 1 diverging to spiracles, then angled and becoming almost parallel to one another. Outer edge of tegula regularly curved. Dorsal surface of head, thorax and abdomen largely black, ventral surface (except sternites 3–6) and legs mainly testaceous *G. xanthopus* (Sauss.).
–. Prominence in front of pronotal fovea weak or moderate, at most subacute, not reflexed . . . . . 7.
7. Outer margin of tegula emarginate before anterior angle which is therefore acute. Sides of abdominal tergite 1 diverging to rather beyond the spiracles, then angled and becoming almost parallel . . . . . 8.
–. Outer margin of tegula regularly curved to anterior angle which is nearly a right angle. Sides of abdominal tergite 1 not angled . . . . . 9.
8. Body almost entirely black, with testaceous legs . . . *G. cornelliana* sp. n.
–. Abdominal tergites 1–3 with posterior pale fasciae, sternites 1–4 testaceous var. *baezae* var. n.

9. Dorsal half of clypeus with quite numerous shallow punctures from which short bristles arise. Pronotal keel stronger, prominence in front of fovea stronger, subacute dorsally. Width of abdominal tergite 1 at posterior margin $\frac{3}{4}$–1 of distance from spiracles to posterior margin. Size large, wing-length 13·0–14·0 mm. Testaceous and yellow species, head and thorax black marked . . . . . *G. vulgaris* (Ducke).
–. Dorsal half of clypeus unpunctured, with tomentum only. Pronotal keel weaker, especially at sides; prominence in front of fovea weaker, even in *G. meridionalis* (R. von Iher.) hardly subacute. Width of abdominal tergite 1 at posterior margin $\frac{1}{2}$–$\frac{2}{3}$ distance from spiracles to posterior margin . . . . . 10.
10. Pronotum with prominence in front of fovea distinctly produced in front of and dorsally to fovea. Abdominal tergite 1 about as long as in *G. pallipes* (Oliv.) but the sides a little more curved. Wing-length 10·0–11·5 mm. Species testaceous with copious black markings or black with many pale markings . . . . . *G. meridionalis* (R. von Iher.).
–. Pronotum with prominence not or scarcely traceable dorsally to fovea. Species testaceous and yellow with some black markings on dorsum of head, thorax and sometimes abdomen . . . . . 11.
11. Abdominal tergite 1 longer and narrower, with sides almost straight. Wing-length 10·0–12·0 mm. . . . . *G. pallipes* (Oliv.).
– Abdominal tergite 1 shorter and broader, with sides distinctly curved. Wing-length 7·0–8·0 mm. . . . . *G. sulfureofasciata* (Ducke).

Gymnopolybia cornelliana sp. n.

♀. Dull black; inner and posterior margins of proepisternum, fore leg except dorsal side of femur, posterior lobes of mesosternum, mid leg except dorsal side of coxa, sclerites at top of metapleuron, hind leg except coxa and ventral shade on femur, propodeal orifice, testaceous-yellow. Sternites 1–2 brown-tinged, 2 posterolaterally narrowly yellow. Wings hyaline, costal area brownish-yellow. Length fore-wings 11·5–12·5, mean 11·9 mm.; hamuli 8–11, mean 9·6.

Clypeus with appressed tomentum on dorsal half and with sparse shallow punctures. Pronotal keel not strong, but quite distinct and sharp edged, a little convex anteriorly, not at all lobate at sides. Pronotal fovea well developed, prominence in front of it small but subacute in front of and dorsally to fovea. Scutellum with a distinctly impressed longitudinal line. Tegula (unlike all the other species) with the outer margin emarginate anteriorly, so that the anterior angle is acute. Transverse keel beneath costa strong but not projecting anteriorly. Fore-wings with parastigma hardly longer than broad. Abdominal tergite 1 (fig. 10) with sides diverging rather strongly to a little beyond the prominent spiracles, then angled and running nearly parallel to one another; posterior margin rather more than half as long as distance from spiracles to posterior margin.

Type ♀ and 19 ♀ paratypes Peru : Rio Tarna, Huacapistana, 1–2.vi.1920 (*Cornell Univ. Exped.*). The type and some paratypes are in the collection of Cornell University. Other paratypes are in the collections of the British Museum, of Dr. J. Bequart and of myself.

The only variation observed in the above series was (*a*) the presence of yellow posterolateral marks on sternite 3 in one specimen, and (*b*) one specimen with the posterior half of the mesosternum yellow-tinged and a small yellow spot in the centre of the mesometapleural suture.

Var. **baezae** var. n.

♀. Black; ventral margin of clypeus, two lines on occiput behind eyes and ocelli, posterior margin of pronotum, two streaks on mesonotum, sclerites at wing-bases, posterior fasciae on abdominal tergites 2–4, most of sternites 1–4, legs except most of coxae, testaceous; abdominal tergites 1–2 light brown; tempora, postscutellum and propodeum with some suffused brown marks. Wings hyaline, brownish-yellow along the costa. Length fore-wings 10·0–11·0 mm., hamuli 10, 10, 11.

Type ♀ and 2 ♀ paratypes East Ecuador: Baeza, iii.1915 (*purchased*). The type will be deposited in the collection of the British Museum. This variety may well prove to be a geographical subspecies.

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STETHOMEZIUM SQUAMOSUM GEN. ET SP. N. INFESTING STORED FOOD IN BRITAIN, WITH NOTES ON A SOUTH AFRICAN PTINID NOT PREVIOUSLY RECORDED IN STORED PRODUCTS (COLEOPTERA)

By H. E. Hinton, Ph.D.

(*Department of Entomology, British Museum (Natural History).*)

Stethomezium gen. n.

Body broadly ova and very strongly convex; head, pronotum, ventral surface, antennae, and legs densely clothed with short, stout, finely spinose, golden-testaceous hairs; elytra much less densely clothed with three kinds of hairs: (1) numerous short and stout ones; (2) a few much longer and relatively more slender hairs, and (3) short and fine hairs which are more abundant on sides than other two kinds. *Head* with eyes small, elliptical, very widely separated, and lateral. Antennae 11-segmented with basal segment stout and as long as combined length of second and third; bases narrowly separated by a median longitudinal ridge, the breadth of this ridge being equal to about a third of the length of first antennal segment. *Pronotum* strongly, evenly convex and without a basal constriction but with a deep marginal line; surface coarsely punctate and granulate. *Elytra* strongly inflated so that they are about a third broader than sternum and fused together along suture. Intervals flat except near base where first, third, fifth, and seventh are distinctly convex. Striae at most only feebly impressed, and each elytron with 10 distinct rows of punctures in addition to a very short, basal, accessory row between suture and convex part of first interval. Hind-wings absent. *Scutellum* small, inclined, on a much lower level than discal region of elytra, and not visible from above. *Prosternum* (fig. 4) very broad between coxae (about three-fourths as broad as mesosternal disk), partly concealing coxa on each side, only feebly narrowed behind, and caudal margin rounded and received into a very broad, rather shallow, arcuate emargination of anterior margin of mesosternum. Mesosternal disk about twice as broad as long, twice as broad as middle coxa, and feebly to moderately concave. Metasternal disk three times as broad as long, about a third broader than mesosternal disk, and feebly convex. Abdomen (fig. 6) with five free and externally visible sternites, the fourth being only slightly more than half as long as the third. *Legs* relatively long. Front coxae nearly as broadly separated as middle and not projecting above (when viewed ventrally) prosternum. Trochanters short and about two-thirds as broad as long, the hind trochanters only slightly longer than the middle trochanters and extending only slightly beyond inner margin of elytra. Femora feebly clavate apically. Tarsi 5-segmented with basal segment about a third longer than second.

Genotype: Stethomezium squamosum sp. n.

Comparative notes: Stethomezium is apparently more nearly related to *Mezium* Curtis than to any other known genus, but it may be distinguished from *Mezium* as follows: (1) the prosternum between the coxae is about six times as broad as the second antennal segment instead of being distinctly narrower than this segment; (2) the mesosternal disk is twice as broad as long, whereas in *Mezium* it is quadrate to distinctly longer than broad; (3) the fourth abdominal sternite is only slightly more than half as long as third, whereas in *Mezium* the third and fourth sternites are approximately equal in length or the fourth may be slightly longer than the third; and (4) the front coxae are

broadly separated and not produced above (when viewed ventrally) the level of the prosternum, whereas in *Mezium* the front coxae are contiguous or only narrowly separated and project considerably above the prosternum which is often concealed by them. The structure of the prosternum and the broadly separated front coxae will serve to distinguish *Stethomezium* from any other genus of the family.

Stethomezium squamosum sp. n. (figs. 1–6).

Length, 1·8–2·8 mm.; breadth, 1·2–1·8 mm. Body broadly oval with elytra moderately strongly inflated. Cuticle strongly shining and pale to moderately dark reddish-brown; glabrous areas of pronotum usually with a distinct metallic lustre and similar areas of elytra sometimes with a feeble metallic lustre. Dorsal surface pubescent as shown in fig. 1;

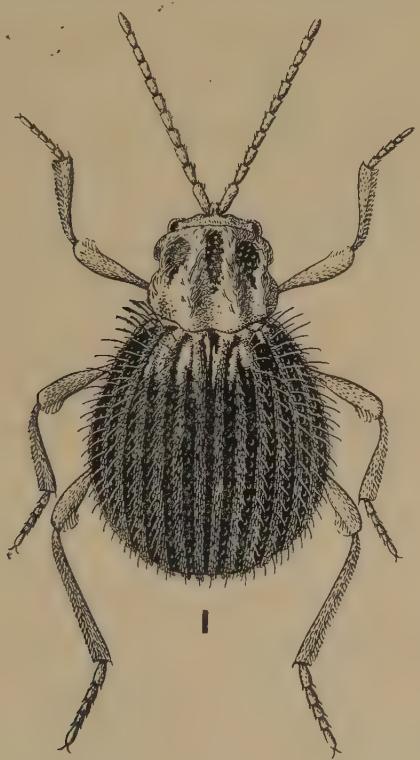
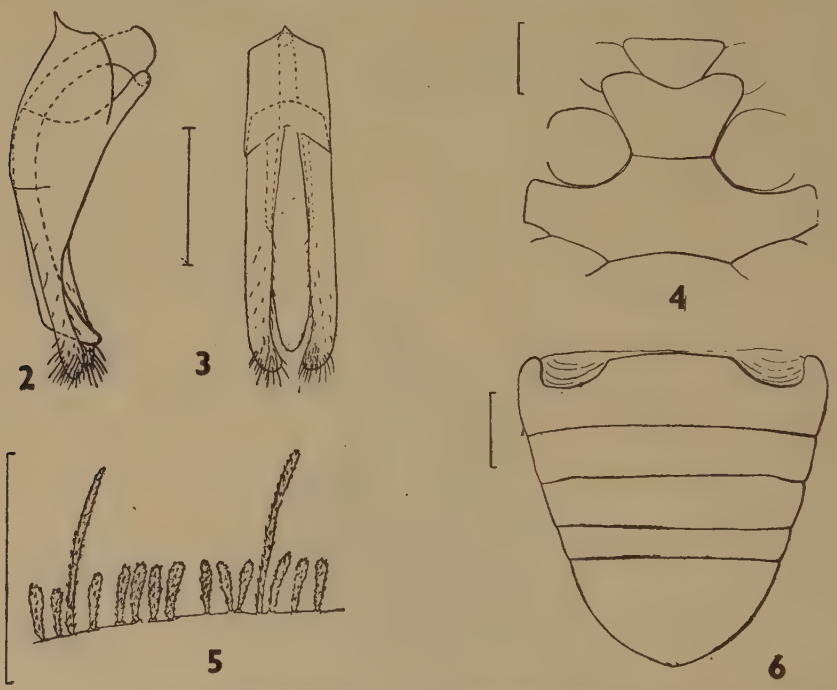


Fig. 1.—*Stethomezium squamosum* sp. n.

ventral surface everywhere clothed with recumbent to erect, stout, club-shaped, finely spinose, golden-testaceous hairs. *Head* with a short, prominent, median longitudinal ridge between antennae, the breadth of this ridge being equal to a third the length of the first antennal segment; anteriorly this ridge is elevated to level of clypeus, the whole of the clypeus being abruptly and noticeably elevated above the level of the front; head on each side with a deep, moderately narrow impression which extends from a point opposite antennal base to postero-dorsal margin of eye, this impression or channel becoming narrower and shallower caudally. Surface with indistinct granules which are slightly finer than

facets of eyes and are separated by one to two diameters but are much sparser on middle of front; clypeus granulate like sides of head; surface very densely clothed with short, very stout, club-shaped, finely spinose, recumbent, golden-testaceous hairs; clypeus with most short hairs erect and with a few slightly but distinctly longer hairs which are also erect. Eye more or less elliptical, about a third longer than broad, and ventral fourth often concealed by cephalic pubescence. Antenna slightly more than half as long as body, basal segment very stout and as long as combined length of second and third, second and third subequal, and other segments slightly decreasing in size towards apex but with eleventh



FIGS. 2–6.—*Stethomezium squamosum* sp. n. (2) Lateral view of right side of male genitalia. (3) Dorsal view of same. (4) Sternum of thorax. (5) Lateral view of a discal elytral interval to show two kinds of setae. (6) Sternum of abdomen. Lines next to figures refer to a length of 0·20 mm.

about a fourth longer than tenth. *Pronotum* moderately evenly convex under pubescence but with very dense pubescence forming three broad and deep longitudinal impressions as shown in fig. 1, the apical half of each of these being glabrous; each side with a broad, glabrous area extending nearly to sternum, this area being at right angles to longitudinal sublateral impression and separated from it by a high ridge of very dense pubescence; glabrous areas of disk with very deep, very coarse, round to oval punctures separated by less than one diameter to as much as two diameters; glabrous area on each side with punctures denser, often about twice as coarse, and more oval in shape; pubescent areas with dense, fine to coarse, irregularly shaped to round granules. Base and sides with a broad, very deep, and complete marginal line, this line being continued to middle three-fifths of anterior margin. *Elytra* with intervals flat or nearly so except on basal fifth or sixth where the first, third, fifth, and seventh are convex; each of these intervals becomes increasingly convex towards base so that at base each is broadly subcarinate; first seven intervals are moderately

densely clothed with short, very stout, club-shaped, finely spinose, erect, testaceous hairs and each of these intervals has a single median row of widely separated, much longer, erect hairs; near base intervals two, four, and six are very much more sparsely pubescent, whereas at base odd intervals have the short hairs much longer and denser; lateral intervals (8–10) with pubescence much sparser, finer, not club-shaped, and usually recumbent except very near apex; at extreme base ninth interval is pubescent like seventh; surface of intervals with granules which are distinctly finer than facets of eyes and are usually separated by one to four diameters. Striae only feebly impressed on basal half and absent on apical half. Each elytron with ten rows of punctures in addition to a very short basal accessory row between suture and convex part of first interval; punctures of discal striae oval, about one-fourth coarser than facets of eyes, half again to twice as long as broad, and separated longitudinally by about twice their lengths; near anterior margin of each puncture is a fine and recumbent hair which is about twice as long as puncture.

♀. Externally similar to male.

Type: ♂ in the British Museum (Nat. Hist.), London, ii.1943, in tin box containing roots of *Maerua pedunculosa* imported from South Africa in 1918 (*H. E. Hinton*).

Paratypes: 200 with same data as type and 200 with same data but found in a box of belladonna leaves imported from Egypt in 1917.

Other specimens: about 4000 found in the *Maerua* roots together with the type and about 500 in the box of belladonna leaves.

Many larvae and a few pupae were also found in the two commodities mentioned above. In the tin of roots the following species, listed in order of abundance, were also found: *Stegobium paniceum* L., *Anthrenus verbasci* L., *Trigonogenius globulus* Sol., *Calandra granaria* L., and *Ptinus tectus* Boield. All of these species, with the exception of the *Calandra* and the *Ptinus*, were also found breeding in the belladonna leaves.

In 1899 Péringuey (*Ann. South Afr. Mus.* **1** (2) : 243) described a Ptinid, *Mezium notiale*, from Cape Colony which may prove to be identical with the new species described here. However, his description is short and vague and his type is not available to me. Furthermore, although it is evident from his description that he examined the ventral surface of his species, no mention is made of the peculiar structure of the prosternum or even of the front coxae, characters which he could hardly have overlooked had they been present in his species.

My attention was first called to this new Ptinid by four Inspectors of the Infestation Branch of the Ministry of Food, Mrs. R. E. Ewer, Miss S. Lodge, Miss P. Lowndes, and Miss C. Rawling, who had been examining the collection of stored food products in the Imperial Institute, S.W.7. I also have to thank Dr. J. R. Furlong, who kindly allowed me to retain all of the material infested by *Stethomezium*.

Mezium natalense Péringuey.

1899. *Mezium natalense* Péring., *Ann. South Afr. Mus.* **1** (2): 244, pl. 7, f. 14.

This species has not previously been recorded in stored products. In the collections of the British Museum (Nat. Hist.) there are four specimens with data as follows: 3, S. Rhodesia: Salisbury, 22.v.1922, " breeding in blood meal," and 1, Transvaal: P'chefstr'm, 6.ii.1924, " in cotton wool stoppers of bottles."

Two species of *Mezium* have previously been recorded breeding in dried

animal and vegetable products. From these *M. natalense* may be distinguished as follows :

1. Elytra with rows of punctures, with distinct but feebly impressed striae, with seven discal intervals feebly but distinctly convex at base, and without a basal collar of dense pubescence; each of seven discal intervals with a median row of stout, erect setae and each more densely setose at base. Mesosternal disk about as broad as long. Africa
Mezium natalense Péring. (1899).

–. Elytra without punctures or striae and therefore without intervals; with a conspicuous basal collar of very dense pubescence; with or without longitudinal rows of stout, erect setae. Mesosternal disk distinctly longer than broad . . . . . 2.

2. Pronotum with tomentum (very dense pubescence) so arranged that it appears to have a broad, shallow median sulcus and a broad, feeble gibbosity on each side on basal half. Elytra with basal tomentose collar entire on each side. Europe, N. Africa . . *Mezium affine* Boield. (1856).

–. Pronotum with tomentum so arranged that it appears to have a broad, very deep, median sulcus and a broad, very prominent gibbosity on each side on basal half. Elytra with basal tomentose collar deeply interrupted on each side. Cosmopolitan . . . . . *Mezium americanum* (Lap.) (1840).

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